Mr. Wheatley's extensive cabinet of undescribed Mesozoic plants, shells and bones.

On motion of Mr. Fraley, Mr. Lesley was nominated Librarian for the ensuing year.

Pending nominations Nos. 425 to 445, and new nomination No. 446, were read.

And the Society was adjourned.

Stated Meeting, January 17, 1862.

Present, twelve members.

Dr. FRANKLIN BACHE, in the Chair.

The Verein für Naturkunde im Herzogthum Nassau, was ordered to be placed upon the list of corresponding societies.

Donations for the Library were received from the Academy at Boston; the Massachusetts Board of Agriculture; the Medical Journal and Franklin Institute; B. V. Marsh, and Sherman & Son, of Philadelphia.

Dr. Bache announced the death of Sir John Forbes, a member of this Society, November 13, 1861, aged 74.

Prof. Lesley, read extracts from letters from Prof. James Hall, of Albany, relative to the Taconic System of Dr. Emmons.

The discussion of this system has lately been revived by Mr. Marcou, supported by the distinguished Bohemian palæontologist M. Barrande. Mr. Hall in these letters claims that the original error was made by the geologists of the New York Survey, who had charge of the eastern divisions of the State, in identifying the two slate formations on the two opposite sides of the Hudson River. Sir William Logan, chief of the Canada Survey, describes a similar error made in the great plain of the Richelieu River, before the existence of the great fault in Canada was known. Mr. Hall, accepting the identification in the Hudson region, proved long ago that the Hudson River slates were the same as the Taconic slates of Emmons. It now appears, that the Hudson River slates, east of the Hudson, are not the No. 3 (the upper part of the Lower Silurian) slates of New Jersey and Pennsylvania, west of the Hudson; and that that name must be dropped; or applied only to the slates of the Hudson River

Valley proper, at the base of the Lower Silurian Formation. In like manner, the Canadian geologists, having traced the great fault from Cape Gaspé, for seven hundred miles, along the south shore of the Lower St. Lawrence, past Quebec, across the plain of the Richelieu, and along the east shore of Lake Champlain, to meet the Hudson River Valley fault, which seems to terminate north of the Highlands, it is now certain that the Quebec Group, the Georgia rocks of Vermont, and the whole Taconic System of Dr. Emmons, belong to the Lower Silurian System near its base, and are a thickening eastward of the calciferous sand-rock over the Potsdam Sandstone which lies at its base. As soon as fossils were discovered in the slates on the east side of the great fault, those slates had to be referred to the base, instead of to the top of the Lower Silurian. But no further change was needful. Everything else remained the same. The structure of the Taconic range, and of the Canadian plain, remained the same. Dr. Emmons's Taconic System *beneath the Potsdam sandstone* has no existence now, any more than it had before the discovery of the fossils, and their recognition by Barrande. Professor Hunt, of Montreal, has shown how both M. Marcou and M. Barrande have mistaken Dr. Emmons's language, where he speaks of an "inversion" of the series in the Taconic Mountains, east of the Hudson. Dr. Emmons supposed the existence of not one great fault, but numerous parallel faults, bringing up lower and lower sandstones, slates and marbles, as one crosses them going east. His interpreters ignorantly suppose a fan-shaped structure in the Green and Berkshire Mountains, *overturning* the dips in the ranges to the west of them. Dr. Emmons taught an *apparent* inversion produced by the parallel upthrows. His interpreters teach an *actual* inversion by overthrow. The succession of the strata, however, is equally falsified by the view of Dr. Emmons and by that taken by his interpreters. Dr. Emmons, however, argued correctly from his premises. Did the parallel and increasing upthrows exist, then the Taconic System would be as he says it is, beneath the base of the Lower Silurian System. M. Marcou, on the contrary, misconceives the whole structure, and his conclusion flows just contrariwise from his premises. The recent careful map survey of the minute anticlinal subfolds of the great fault along the east shore of the foot of Lake Champlain, by Sir William Logan, has resulted in establishing the old accepted order of the rocks, as both the apparent and the real order of the Taconic System; and the only resource we have is to accept his theory, of a great thickening of the calciferous sand-rock along a deep

sea-shore line, extending from the mouth of the Gulf of St. Lawrence to Alabama; and a subsequent disruption and up-shove against this steep shore, along perhaps its whole extent, certainly along an extent of seven hundred miles. Along this whole line the once so-called "Hudson River Slates" (the No. 3, of the Pennsylvania Survey) are over-ridden by and abut against the Hudson River Slates proper (Taconic Slates, or No. 1, of the Pennsylvania Survey). Whether the Philadelphia and Baltimore System will obtain hereby, at last, its explanation, we can only conjecture. But certainly its rocks and minerals resemble some of the members of this "Quebec Group" or Taconic System; and there are evidences along its northwest edge, from Trenton past Philadelphia, of a great fault, in the place where we should be inclined to look for one.

Mr. Powel exhibited the stalk of an *Asclepias* from his garden, to show the strength of its fibre. Prof. Haldeman, mentioned an instance of thread spun from the nettle fibre.

Prof. Lesley was chosen Librarian for the ensuing year.

Standing Committees for the year were chosen, as follows:

On Finance.—Mr. Fraley, Mr. J. F. James, Mr. Samuel Powell (in the place of Mr. Justice, declining re-election).

On Publication.—Dr. Bridges, Mr. T. P. James, Dr. Hartshorne, Prof. Coppée, Dr. Wister.

On the Hall.—Mr. Peale, Judge King, Prof. Coppée.

On the Library.—Dr. Bell, Dr. Stevens, Dr. Coates, Mr. Foulke, Mr. Barnes (in the place of Mr. Ord, declining re-election).

The list of surviving members was then read, as follows:

Summary.

On the List, January 1, 1861,			376
Elected in 1861,	In the U. S.	4	8
	Foreign	4	384
Reported as deceased,	In the U. S.	6	9
	Foreign	3	375
Resigned, in the U. S.			1
Number of members January 1, 1862,			374
Of whom are resident in the U. S.			267
And in foreign countries			107

Nominations Nos. 425 to 446, and new nomination No. 447, were read.

Nominations Nos. 425 to 445 were ballotted for.

The report of the Committee on the Library was presented, and its consideration postponed, owing to the lateness of the hour.

The ballot boxes being opened, the following persons were declared by the presiding officer duly elected members:

Mirza Alexander Kasem Beg, of St. Petersburg.

Professor Otto Böhtlingk, of St. Petersburg.

Professor G. Forchhammer, of Copenhagen.

Professor J. S. Steenstrup, of Copenhagen.

Professor C. J. Thomsen, Director of the Royal Museum at Copenhagen.

Professor Andrew C. Ramsay, of England.

Professor Edouard Desor, of Neuchâtel.

Professor L. G. De Koninck, of Liége.

Professor Joachim Barrande, of Prague.

Professor Robert W. Bunsen, of Heidelberg.

Professor William Hoffman, of London.

Doctor H. R. Göppert, of Breslau.

Professor Alexander Braun, of Leipsig.

Mr. William J. Hamilton, of London.

Sir William J. Hooker, of London.

Doctor J. J. Kaup, of Darmstadt.

Doctor J. Anthony Froude, of Oxford.

Doctor Hermann Lebert, of Breslau.

Doctor S. Weir Mitchell, of Philadelphia.

And the Society was adjourned.

Stated Meeting, February 7, 1862.

Present, eleven members.

Vice-President, Judge Sharswood, in the Chair.

A letter, accepting membership, was received from Dr. S. W. Mitchell, dated 1226 Walnut Street, January 31, 1862.